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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,531	10/10/2003	Gerhard Hehenberger	1912-115	9729

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EXAMINER	
EWALD, MARIA VERONICA D	
ART UNIT	PAPER NUMBER
1722	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

VD

Office Action Summary	**Application No.** 10/682,531	**Applicant(s)** HEHENBERGER ET AL.
	Examiner Maria Veronica D. Ewald	**Art Unit** 1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/10/2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 10. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 3 and 6 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Braun, et. al. (3,516,120: figures 1 – 3, column 2, lines 45 – 54, column 5, lines 24 – 26, 44 – 46, column 6, lines 4 – 5, 24 – 26, 31 - 35). In regards to claim 1, Braun, et. al. teaches an extruder comprising: a granulating head having an end face (column 2, line 50) and comprising a plurality of passage openings for the passage of plastics melt (column 2, line 45) and an apertured granulating plate arranged at said end face of the granulating head and having apertures following the passage openings (column 2, lines 47 – 48), wherein the passage openings each end in a separate socket-shaped projection projecting beyond a front end face of the granulating head (5 – figure 1) and tapering in its cross-section towards a free end, and the apertures tapering in their cross-sections to a front running face such that a cutting chamber following on the front running face does not have any contact with the socket-shaped projections (column 6, lines 31 – 34). Braun, et. al., further teaches that an inserted tube within the passage openings is recessed at its lower end a fraction of a millimeter from the plate face, so that the lined passageway is not flush with the plate face. Though the socket-like projections discussed by the applicant are within the granulating head itself and does not discuss the use of inserts to form such projections, the reference teaches that the insert can be poured in place or permanently cemented into the distributor channel (column 5, lines 68 – 69), thereby producing one singular passageway which resembles the applicant's description. In addition, Braun, et al., teaches that the configuration of lining the passageway ensures that the passageway does not contact the plate surface on which the cutting knives sweep across. This closely resembles the applicant's statement that the apertures taper so that the socket-shaped projections do not contact the cutting surface.

In regards to claim 2, Braun, et. al., teaches that a clear space be provided for thermal insulation between the projection, or the projections, respectively, of the granulating head and the apertures of the apertured granulating plate, which clear space is filled with an insulating medium (column 2, lines 53 – 54).

In regards to claim 3, Braun, et. al., teaches that the projections and apertures are designed to be conical. The reference further teaches that the inserted tubes (providing insulation) are supported at their lower conical end in a correspondingly tapered portion of the plate bore (5-Figure 2). In addition, the inserted tubes can be fitted into the plate bore so that it is at a slightly smaller diameter. (column 6, lines 38 – 40). This closely resembles the applicant's statement that the cone angle of the apertures be larger than the cone angle of the projections.

In regards to claim 6, Braun, et al., teaches a granulating head of an extruder for granulating plastics, said granulating head having a plurality of passage openings for the passage of plastics melt (column 2, line 45), wherein the passage openings each end in a socket-shaped projection projecting beyond a front end face of the granulating head and tapering in its cross-section towards a free end (5 – figure 1).

In regards to claim 7, Braun, et al. teaches that the socket-shaped projections taper conically (column 6, lines 4, 24).

In regards to claim 8, Braun, et al. teaches that the granulating head and projections are formed in one piece. The reference further states that the head is of the usual steel construction with a distributor block containing one or several annular canals (column 5, lines 44 – 45).

In regards to claim 9, Braun, et al., teaches the use of separate inserts for the granulating head inserted into the socket-shaped projections. The reference further teaches that the insert or liner extends over partially or the entire length of the bore to provide insulation (column 2, 53 – 55).

In regards to claims 10 - 12, Braun, et al., teaches that the granulating plate have the apertures provided in the circular-ring-shape (column 5, lines 24 – 26) tapering in their cross-sections towards a front running face. The reference further teaches that the apertures taper conically at their lower end towards the plate (column 6, line 25). This closely resembles the applicant's statement that the apertures' cross sections taper toward the front running face, partially continually.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertolotti (4,678,423, figure 3, column 3, line 22 – 26) in view of Braun, et al. as applied to claims 1 –3 and 6 – 12 above. Bertolotti teaches an extruder with nozzles that can have variable wall thicknesses along its length. The reference further teaches that the small thickness at the nozzle free end part (column 3, line 26) is preferred to favor thermal flow and reduce heat loss. Bertolotti, however, unlike Braun, et al., does not teach that the nozzle bores are recessed from the faceplate to avoid the cutting surface. Braun, et al., does not teach an extruder with nozzle bores that taper to reduce heat loss, but teaches that the tapered bore is useful in that the tapered end (5-figures 2 and 3) holds a loosely inserted liner in place under the extrusion pressure exerted towards the plate face (column 6, line 3 – 6). Braun, et al., further teaches the use of recessed nozzles, so that they do not contact the cutting surface.

Before a result-effective variable such as the angle, as discussed by the applicant, can be optimized, it must be characterized to achieve a certain result, which is alluded to in the prior art as taught by Bertolotti to reduce heat loss. (see In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)). The applicant, in their claim, only states the angle range (5° – 20°, 11° is preferred) without introducing specific reasoning. There is no claimed evidence as to why the specified range is critical. (see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997)). Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to modify the nozzle bores of Bertolotti to taper at specific angles for the purposes of keeping heat loss to a minimum. In addition, it would have been obvious at the time of the invention to one of ordinary skill in the art to modify the nozzle bores of Bertolotti to have the slightly recessed nozzles of Braun, et al. for the purpose of minimizing contact with the cutting surface.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Munz, et al. (5,679,380, figure 3, column 4, lines 2 – 4) taken together with Braun, et al. Munz, et al., teaches the use of a fastening plate wherein the apertured granulating plate is fastened to the granulating head by means of at least one fastening plate which has an end-side flange engaging in the step of the apertured granulating plate (16, 22b-figure 3, column 4, lines 2 – 4). However, Munz et al., does not teach that the fastening plate is substantially plane with the granulating plate. Braun teaches the characteristics described previously, but does not teach the use of a fastening plate as described by Munz, et. al. It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the plate of Braun, et, al. to be configured so that the plate is attached to the granulating head by means of the Z-shaped fastener of Munz, et al., ensuring that the fastener is substantially plane with the plate.

Claims 13 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munz et al. (5,679,380, figure 3, column 4, lines 2 – 4), in view of Braun, et al. as applied to claims 10 – 12 above. Munz, et. al. teaches an apertured, circular plate secured to a die body with a Z-shaped fastening plate, of which the free leg laps over the plate (16, 22b-figure 3). Munz further teaches the apertured plate has a peripheral step on which the fastening plate sits. This closely resembles the applicant's statement that the apertured granulating plate have a peripheral step on its inner and outer circumference. Braun teaches the characteristics described previously; however does not teach a peripheral step is provided so as to reduce the cross-section of the apertured granulating plate in its operating position towards the running face. It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the plate of Braun, et al., to have a peripheral step as disclosed by Munz, et al., for the purpose of reducing the plate's cross section in its operating position towards the front running plate. The plate of Munz, et. al., is shown to have a peripheral step on which a Z-shaped fastening plate is attached. The plate is also known as a wear protection layer since it does contact the cutting knives and also protects the projections within the die body from contacting the cutting surface, similar to the die body/plate configuration of Braun, et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Utech can be reached on 571-272-1137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ROBERT DAVIS
PRIMARY EXAMINER
GROUP ~~1300~~ 1700

3/21/05